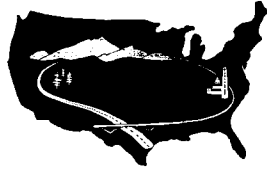


**FEDERAL HIGHWAY ADMINISTRATION
&
U.S. FISH & WILDLIFE SERVICE**



**GUIDANCE
ON
THE FEDERAL LANDS
HIGHWAY
REFUGE ROADS PROGRAM**

**ESTABLISHED BY
THE TRANSPORTATION EQUITY ACT FOR THE 21ST
CENTURY**

May 2000

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FEDERAL HIGHWAY ADMINISTRATION GUIDANCE ON REFUGE ROADS

Revised March 1, 2000

Background:

The document provides guidance to help identify projects and project enhancements that may be funded under the Refuge Roads (RR) program category. The basic eligibility requirements were established by the Transportation Equity Act for the 21st Century (TEA-21) and are included in Title 23 - United States Code (23 USC). Section 204 of 23 USC requires that funds made available for refuge roads shall be used only to pay the cost of:

A) Maintenance and improvements of refuge roads.

B) Maintenance and improvement of eligible enhancement projects noted below that are located in or adjacent to wildlife refuges:

- 1) Adjacent vehicular parking areas
- 2) Provisions for pedestrians and bicycles and
- 3) Roadside rest areas including sanitary and water facilities

C) Administrative costs associated with such maintenance and improvements.

Examples of eligible items are included in the **Appendix**.

Please note that construction of new roads is not authorized by TEA-21.

TEA-21 (23 USC 202(e)) requires that the funds be distributed base upon relative need of the various refuges. In order to establish priorities, TEA 21 (23 USC 204(a)(6)) also requires that FWS develop and adopt by rule, safety, bridge, pavement and congestion management systems as appropriate.

Public Roads:

TEA -21 (23 USC 101 (a) (28)) defines Refuge roads as public roads that:

- 1) Provide access to or within a unit of the National Wildlife Refuge System and,
- 2) Title and maintenance responsibility are vested in the United States Government.

Public roads are defined by 23 USC 101 (a) (27) as any road open to public travel. Because of the unique usage of refuge roads, this has to be further clarified by these guidelines. In order to be considered Public Roads, refuge roads must be opened to the general public during substantial parts of the year. Seasonal closures during nesting periods and inclement weather are permitted. However, roads only opened by permit to specific public interests, such as to hunters for specified hunting periods, are not considered public roads.

Scope of Improvements:

Roads:

The refuge road funds may only be used for rehabilitation to extend the service life of an existing road and enhance safety. Such work is also known as Resurfacing, Restoration, and Rehabilitation, (3-R). 3-R work includes the placement of additional surfacing materials and/or other work necessary to return an existing roadway including shoulders, the roadside, and appurtenances, to a condition of structural adequacy.

Most 3-R work occurs on the existing road bench. Refuge Roads work generally will not involve widening beyond the existing road bench or require the construction of new retaining walls, or cuts and fills. Exceptions where RR projects could occur off of the road bench include work on drainage structures, existing retaining walls, slope failures, bridges, and spot traffic safety improvement work.

Construction of new roads is not authorized by TEA-21.

Bridges:

Eligible refuge road funded bridge work includes approach fill rehabilitation, superstructure (deck, rails & girders) replacements, abutment and foundation repairs, abutment slope protection, foundation scour repair and protection work, and piling replacements. Small bridges or large box culverts may be replaced if the estimated cost for a replacement structure is \$500,000 or less. Funding for larger bridge projects is normally provided under the Refuge Operating Needs System (RONS) program, so larger projects are not normally eligible for refuge road funds.

Three alternatives exist when the scope of a proposed project increases beyond the RR funding parameters: 1) reduce project to fit within the funding limits, 2) defer and resubmit as a construction project; or 3) procure funding for non-RR work through other funds (e.g., line-item, grants or fee revenues).

These funding limits noted are not intended to prevent combining several eligible projects within a refuge or complex into one larger project where it will result in economy of scale in construction costs or contract administration.

Safety Projects:

Reconstruction of refuge roads for spot traffic safety improvement project work to correct identified safety problems at high accident locations may be undertaken with RR funds. Such work is limited to specific sites (e.g. a curve or intersection), where a history of accidents have been documented, and where solutions have been developed to reduce accidents at the site. Studies of high accident sites may also be funded out of a Region's RR program.

Many of the limitations noted in this guidance do not apply to safety improvement work. However, the cost for any single site normally should not exceed \$500,000 in estimated construction costs. Work could include roadway widening, realignments, new paving, new

guardrails or walls, new sidewalks or bicycle paths for separation of traffic, street lighting, traffic signals or other improvements which can be expected to reduce the rate or severity of accidents at that location. In addition, needed safety work such as turning lanes on non-refuge roads intersecting with refuge roads may be included in RR funded projects. These projects must be coordinated with the agency having jurisdiction of the intersecting roadway and funding should be split with that agency if possible.

Design Standards:

Because this is a 3-R program and designers will be required to stay within the existing roadway prism, design standards for new construction and re-construction are typically not applicable. Since FWS has not developed 3-R design criteria, AASHTO design criteria should be the basis for development of design exceptions where traffic safety experience does not warrant improvements to full design criteria. Achievement of AASHTO standards usually will not be possible without demonstrated and documented safety deficiencies as noted above.

Program Effectiveness Measures:

The planned performance measure for refuge roads is the change in the condition of roads and bridges as measured by the Road and Bridge Inventory systems. Besides this degree of improvement shown for FWS Regions in the annual Road Inventory Program (RIP) condition surveys, the ratio of administrative costs to construction costs, and the average cost per mile for projects in each Region will be used by FWS and FHWA to measure how efficiently and effectively each Region operates its program.

Project Selection Priorities:

TEA-21 (23 USC 202 (e) and 204 (k) (3)) also provides guidance on criteria for selection of projects to be improved under the RR program. Projects shall be selected taking into consideration:

- (1) The comprehensive conservation plan for each refuge.
- (2) The need for access as identified through land use planning
- (3) The impact of land use planning on existing transportation facilities
- (3) The National Wildlife Refuge System Administration Act of 1966

Since TEA-21 requires funding to be eligible based upon the relative needs of the various refuges, the selection process should favor project items that improve the condition rating factors that help establish the needs. These factors include the road condition rating which considers the number of miles of fair, poor, and failed (deficient) roads.

TEA-21 (23 USC 204(a)(6)) also requires that roads in the Federal Lands Highway program develop asset management systems to help insure the efficient use of FLH funds. These include safety, bridge, pavement and congestion management systems as applicable. While neither the act

nor FHWA specify the details of the management systems, the FHWA and FWS will jointly determine the appropriate systems to be implemented.

The requirement for a bridge management system is being met by existing FWS bridge management program. The requirement for a pavement management system is being met by the FHWA inventory and condition assessment program for FWS managed public use roads. Given the limited number of areas with congestion and safety programs, these programs are not applicable to most refuges. The Regions will consider congestion and safety in project selection, and identify any areas of specific concern to the national refuge roads coordinator.

Appendix

Eligibility

Except when unusual safety concerns require, the following work that will not be funded under the RR program:

- 1) constructing new parking areas or pullouts, widening off of the present road bench,
- 2) realigning and relocating roads (vertical or horizontal realignments), and
- 3) constructing new pedestrian trails or bicycle paths.
- 4) recurring maintenance practices such as grading roads and mowing roadsides.

Regions can obtain assistance for RR project planning, design, compliance and construction contracting services from the Regional Engineering Offices, Division of Engineering in Denver, their respective Federal Lands Highways (FLH) Divisions, other Federal agencies (e.g. Corps of Engineers, Bureau of Reclamation, Forest Service, etc.) or consulting engineering firms. Such activities, including program formulation and coordination and project tracking, may be paid for out of available Regional RR funds.

Project administrative costs such as travel for on-site reviews and meetings related to the RR program may be included in estimated project costs. However, salaries of permanent staff in FWS Regions and Refuge field stations, who are base funded, can not be charged to the FLH Program project accounts. The only exception to this may occur to pay the overtime portion of force account work. However, this higher rate should have been used in the documentation justifying the use of force account work versus doing the work by contract.

The costs for any planning studies such as Road System Evaluations, or RR Engineering Studies, will be the responsibility of each Region using their RR funds.

As part of an overall RR improvement project, Regions may use RR funding for sign upgrades to meet the Manual of Uniform Traffic Control Devices standards. However, routine replacement due to wear and age is ineligible for FLH Program funding.

On a specific road improvement project, no more than 5% of the individual RR improvement project funds may be used for non-roadway related improvements (i.e., visitor orientation brochures, interpretive signage, etc.).

Specific Examples of Project Refuge Road Eligibility Criteria

The following lists provide general guidance as to what may be funded.

WORK ITEMS THAT ARE ELIGIBLE FOR FUNDING:

Project Support Items:

Traffic engineering and safety studies.

Identification and surveillance of accident locations.

Road Inventories.

Bridge, pavement, safety and congestion management systems.

Necessary environmental studies and resource investigations confined to the general roadway construction limits.

Project-related revegetation and control of invasive plants.

Necessary architectural and landscape engineering services.

Engineering design for roads, bridges, adjacent vehicle parking areas, provisions for pedestrian and bicycles, and roadside rest areas including sanitary and water facilities.

Construction engineering for contract administration, inspection and testing.

Necessary interagency program/project formulation meetings.

Interagency program review meetings (per interagency agreement).

Necessary interagency project coordination.

Research part of coordinated technology implementation program.

Construction and Improvements Items:

Resurfacing (milling, recycling and overlaying) existing pavements.

Excavating and replacing failed base courses and poor subgrade materials.

Replacing, upgrading or relocating deteriorated, undersized or poorly located drainage structures (aprons, inlets, culverts and headwalls etc.).

Repair or upgrading existing guardrails or guardwalls.

Minor widening of the roadway, realigning of intersections, adding of turn lanes, intersection islands, or pullouts, flattening of curves, or adjusting curve superelevation if the work can be accomplished on the existing road bench.

Repairing, rehabilitating or replacing existing retaining walls if the estimated cost of a single wall or site is \$200,000 or less.

Repairing and or stabilizing landslides, severely eroding or failing slopes if the estimated cost of a single site is \$200,000 or less.

No more than 5% of the project's estimated construction costs should be expended off of the roadway bench to widen or realign the road, construct new safety pullouts or add other

features.

Removing or grinding existing pavement to convert a road to an aggregate surface.

Replacing, upgrading or adding new pavement markings and signage to address changing traffic

patterns, new uses or safety problems as well as to meet current standards if occurring in conjunction with an RR roadway project. Sign or marking replacement due to age, damage or deterioration is not eligible for funding, unless undertaken as part of a road rehabilitation project.

Engineered pavement overlays that add structural value, design life or improved skid resistance.

Double bituminous surface treatments and chip seals that are part of predefined stage construction or form final surface on low volume roads.

Engineered rehabilitation or reconstruction of pavement structures, bridges and bridge decks.

Engineered spot safety improvements resulting from safety studies.

Upgrading of substandard traffic barriers and bridge rails to current standards.

Replacement of nonstandard traffic regulatory and guide signs.

Upgrading substandard or nonconforming traffic markings (one time only).

Refuge entrance signs if the sign conforms to FWS standards, is in a safe location, is part of an adjacent Refuge Roads project, and is of reasonable cost (\$10,000 maximum).

Accommodating traffic and pedestrians through construction zones.

Public approach roads and interchange ramps that are under the jurisdiction and responsibility of the FWS.

Installation of warranted roadway lighting.

Adjustment of utilities directly related to roadway work.

Conduits crossing under the roadway to accommodate future planned utilities.

Landscaping and native plant seeding of areas disturbed by the RR program projects.

Landscaping required to meet Environmental Impact Study mitigation measures resulting from roadway construction.

Construction of erosion control and environmental mitigation measures directly related to roadway

construction.

Experimental features where there is a planned monitoring evaluation schedule.

Public parking lots or pull-offs to trail heads adjacent to RR projects, interpretive areas, public lodging, visitor center, (including necessary supporting retaining walls, protective railings and adjacent perimeter sidewalk).

Provisions for pedestrians and bicyclists within/adjacent to roadway prism when warranted for safety reasons.

Restoration of borrow pits created by projects funded from the RR program.

Force account and day labor, including materials and equipment rental being performed in accordance with approved plans and specifications, that has been determined to be cost-effective (public interest).

All the aforementioned work can be performed on existing parking areas, pullouts, sidewalks or bicycle paths if the work is incidental to a RR roadway project.

WORK ITEMS THAT WILL GENERALLY NOT BE ELIGIBLE FOR FUNDING:

(Funding will be determined on a case-by-case exception basis taking into consideration overall relative Refuge Road program priorities)

Project Support Items:

Acquisition of scenic easements and scenic or historic sites.

Brochures for public use unless they are prepared for refuges with roads impacted by improvements. However, the actual brochure contract may be separated from the roadway construction and lumped to include brochures from several refuges. The combined costs of all non-roadway improvements may not exceed 5% of the road construction costs.

Construction and Improvement Items:

Acquisition of alternative transportation systems unless it would facilitate visitor access and improve usage of the roadway system.

Bike paths, unless they are part of the refuge unit's approved Comprehensive Conservation Plan, constructed in conjunction with RR program projects, and are:

part of a roadway prism necessary for safety reasons and if bike traffic warrants.

Independent paths used for transportation and safety reasons based on accident and traffic data analysis.

Interpretive signage part of a roadway project unless they are prepared for refuges with roads

impacted by improvements. The costs may not exceed 5% of the road construction costs.

Construction of visitor information centers and related items.

Construction of roadside rest area including sanitary and water facilities.

Bridge painting work on structures (painting of major large structures considered on a case-by-case exception basis).

Public roads which provide access to areas under the jurisdiction and responsibility of the FWS but which are not owned by the Service and/or are not required to be maintained by the Service.

WORK ITEMS THAT ARE NOT ELIGIBLE FOR FUNDING:

Project Support Items:

General refuge planning.

Non-program specific conferences, field trips, or training conferences.

Cultural resources investigations and work outside roadway construction limits

Construction or Improvements Items:

Construction of new roads, new campground roads and related parking pads.

Cyclic roadway maintenance work including chip and slurry seals (seal coats), pavement patching, roadway grading, shoulder and ditch grading, cleaning culverts, snow removal, roadside mowing, vegetation control, normal sign repair and traffic markings.

Seal coats on top of new asphalt concrete pavements.

Cyclic bridge maintenance work including cleaning and repairing bridge joints, cleaning and repairing bridge drainage, and repairing other bridge appurtenances.

Landscaping and irrigation systems of areas not disturbed by refuge road construction.

Landscaping of disturbed areas with non-native plant species.

Utilities and buildings not disturbed by construction.

Sanitation facilities not disturbed by construction.

Walls and erosion protection that are not part of or support the roadway prism.

Recreational boat launching facilities and ramps.

General refuge development projects.

Roads that serve only an administrative site such as refuge housing, maintenance area or refuge dormitory (or a combination of these).

Roads that provide access to Refuge Headquarters which is not open to the general public (i.e., not a visitor center).

Roads that are primarily used for administrative purposes and open to the public only for very limited periods during the year under restrictive conditions.

Restoration of borrow pits (or portions of borrow pits) created by projects funded with non Refuge Road program funds.

Repairs to or replacement of fences not disturbed by Refuge Road construction.